An Assessment and Analysis of the Warm Season Diurnal Cycle Over the Continental United States and Northern Mexico in Global Atmospheric General Circulation Models

Figures

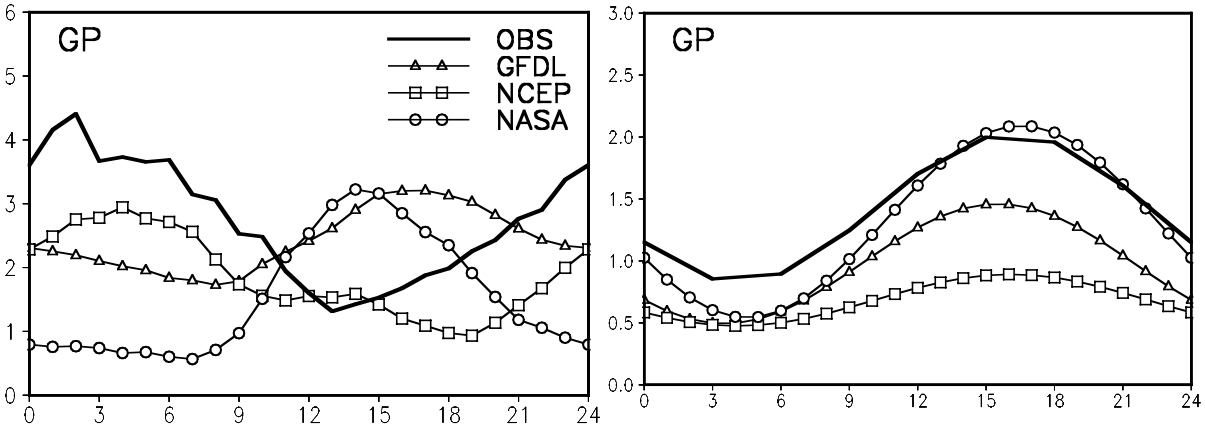

Fig. A1.1. Left panel: Averaged diurnal variation of precipitation rate (mm day^{-1}) over the Great Plains. JJA mean variations from the NCEP HPD observations (solid thick line), and the GFDL (triangle), NCEP (square), and NASA (circle) models. Right panel: Same as left panel but for the convective available potential energy (CAPE).

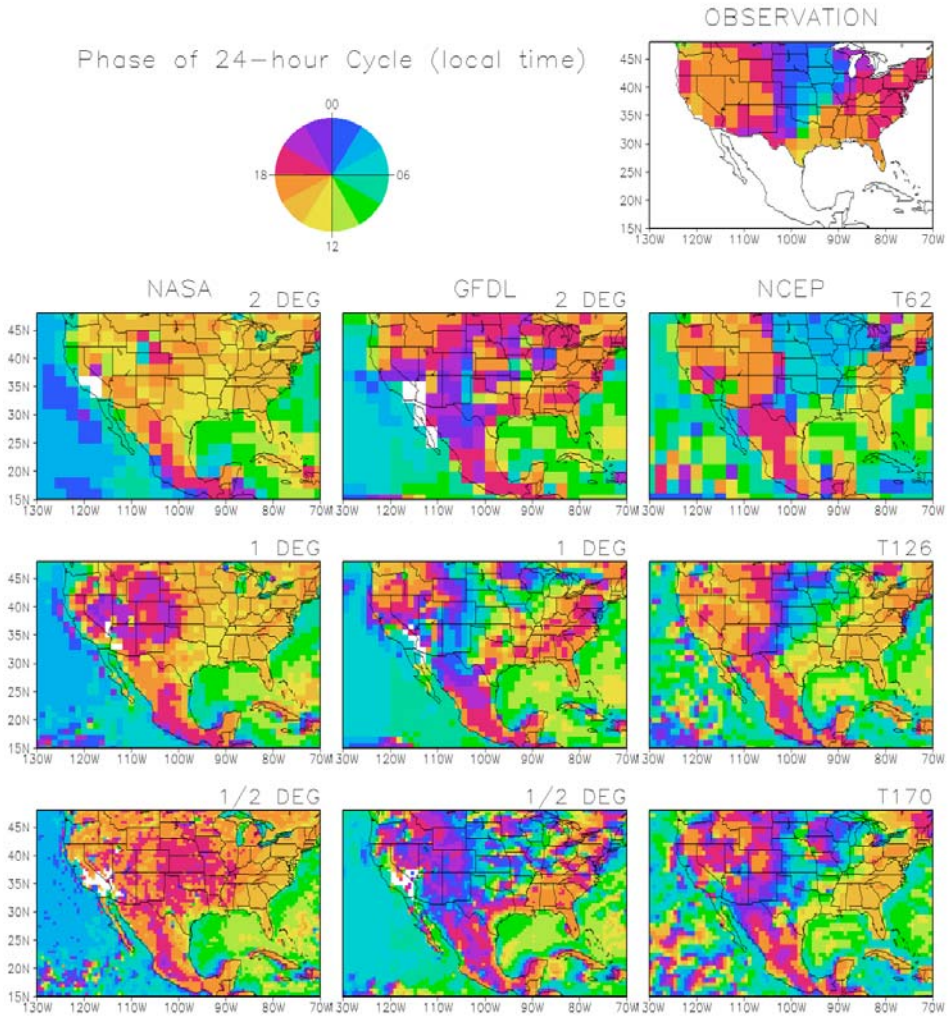

Fig.A2.1. The phases of diurnal cycle of precipitation rate from the observation and three AGCMs with different horizontal resolutions. Units are local time.

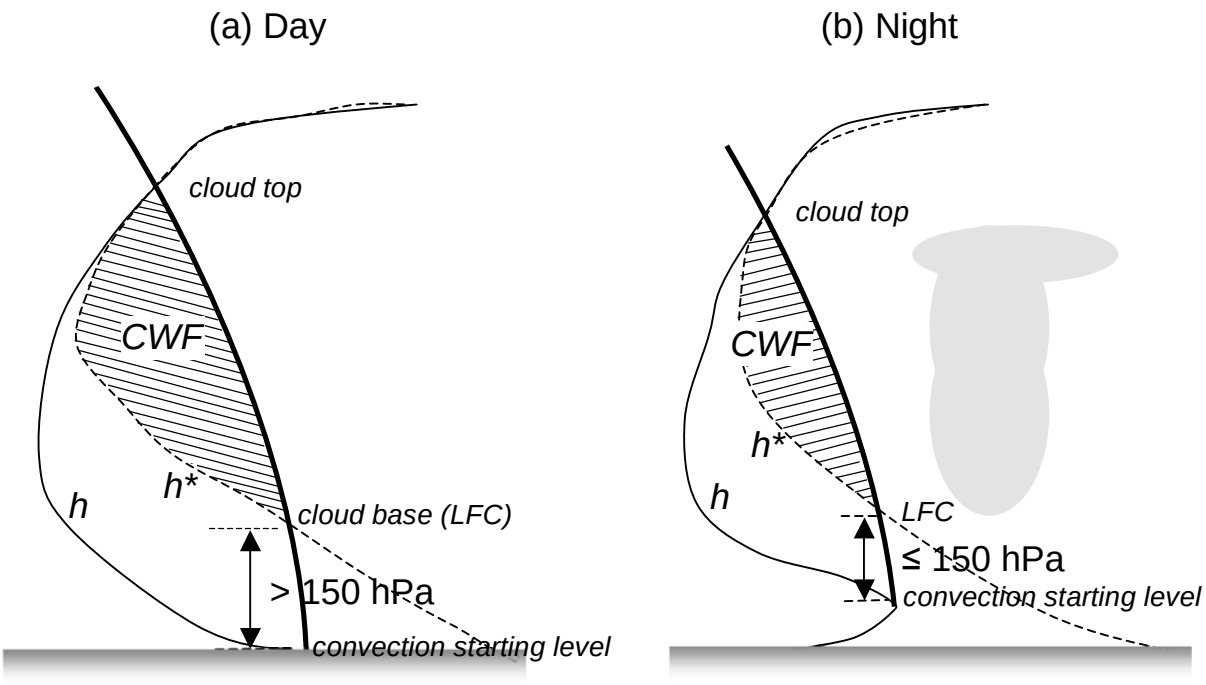

Figure A4.1. Schematics for (a) day time and (b) night time profiles of moist static energy (h), saturated moist static energy (h*), and CWF in the model.

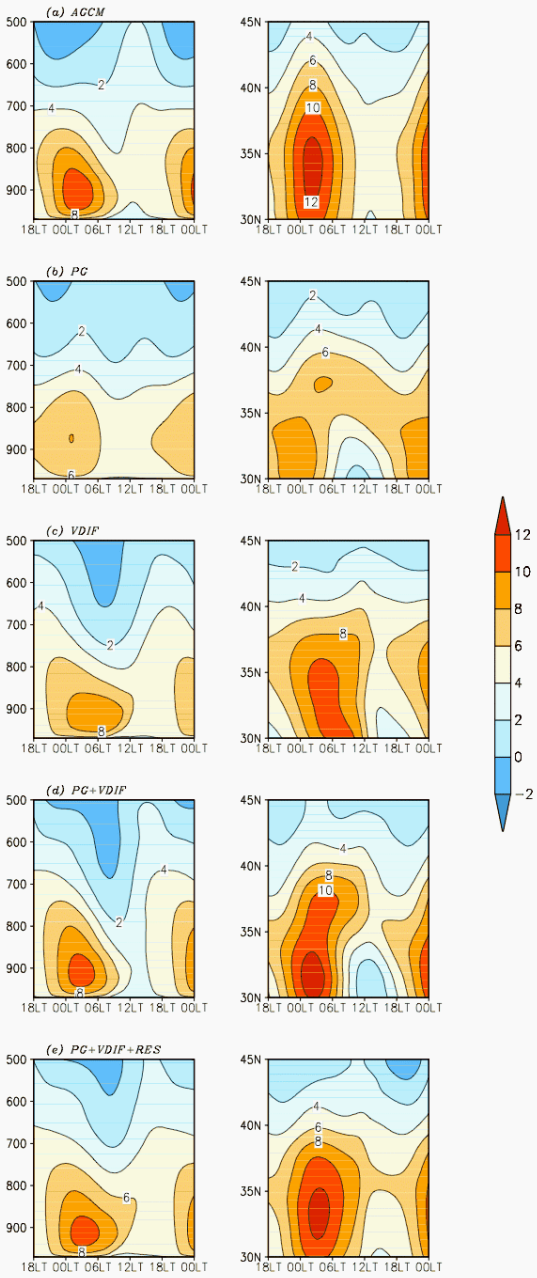

Fig. A5.1. Diurnal evolution of the vertical distribution (left panels; averaged over 100-95^{o}W; 30-40^{o}N) and horizontal structure at the 6th model level (~900mb) from the surface (right panels; averaged over 100-95^{o}W) of the meridional wind, for (a) AGCM, and experiments based on the simple model: (b) PG, (c)VDIF, (d) PG+VDIF, (e) PG+VDIF+RES. Units: [redacted].

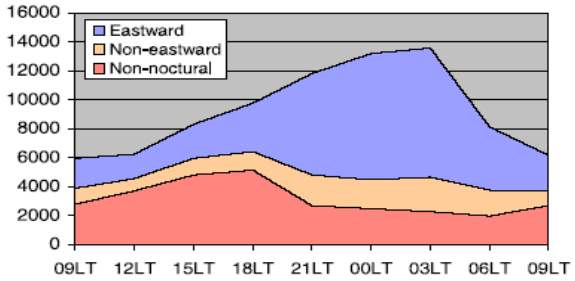

Fig. A6.1 Diurnal evolution of cumulative precipitation over the Great Plains (100-90^{o}W, 35-45^{o}N) due to three categories of events: *non-nocturnal*, *non-eastward* and *eastward events*. Units: mm day^{-1}.